SUPERFUND HOT ISSUES
FOR: SENATE APPROPRIATIONS COMMITTEE HEARINGS
APRIL 23, 2015

Issue: **Lead cleanup status in Southeast Missouri Mining District (SEMO) and Southwest Missouri Mining District (SWMO).**

Background/Status:

- **SEMO:** The Superfund program is addressing 12 lead mining and ore processing related sites in the Southeast Missouri Mining District. The priority has been to prevent ongoing exposures of residents, especially young children, to lead contaminated soils and drinking water and to develop cost effective actions to address impacts to the natural environment for implementation in the future. Through fiscal year 2014, over 1.8 million cubic yards of contaminated soil at over 4,000 residential properties, including schools and parks, has been addressed across a seven county area; over 11 million cubic yards of mine waste on over 2,600 acres have been excavated and stabilized; and 300 homes have been provided an alternate source of drinking water. Much similar work at over 5,000 residential properties and 100's of miles of stream sediments and floodplains along Big River and other SEMO streams remains to be accomplished across this mining district.
- **SWMO:** The Missouri portion of the Tri-State Mining District is referred to as the Southwest Missouri Mining District and includes six sites spread across four counties. Most of the direct residential exposure has been addressed with lead contaminated residential soil removed from over 3,300 residential properties and an alternate source of water provided to over 2,200 homes. In addition, through fiscal year 2014, over 8 million cubic yards of mine waste on 3,000 acres of mine impacted lands have been remediated, with over 7,000 acres of mine waste remaining to be addressed.
- **Joint Missouri Lead Strategy:** In 2005, EPA, Missouri Department of Natural Resources, Missouri Department of Health and Senior Services, Agency for Toxic Substances and Disease Registry, and U.S. Fish & Wildlife Service developed a lead sites strategy to approach the large and growing requirements to address legacy and active lead mining and processing impacts to human health and the environment. The strategy was updated in 2012 with an expanded set of agencies including the Missouri Department of Conservation, the U.S. Army Corps of Engineers, and the Missouri Attorney General's Office. A Lead Task Force was established to develop and oversee the implementation of this significantly expanded Missouri Lead Strategy. Building on past progress, the updated strategy addresses the entire scope of the human health and ecological problems created by the legacy and ongoing mining practices. Many of the remaining problems will be complex and expensive to address, making communications and outreach activities essential to securing resources and acceptance of future actions.

Message:

- Much progress has been made to address the human health impacts of the historic and ongoing mining practices in Missouri, and work is underway to address the remaining lead contaminated residential properties and assess and address the ecological impacts.
- Negotiations with Doe Run are ongoing to address the cleanup of lead contaminated residential properties identified in the 2011 ROD for OU01 at the Big River Site. The ROD estimated 4,000 residential properties requiring cleanup at an approximated cost of $130 million.

Contact: Gene Gunn, 913-551-7776

Issue: Ellisville Superfund Site cleanup – (Strecker Forest Area)

Background/Status: EPA recently concluded a Superfund removal action at the site, an action which began in March 2014 and was completed in March 2015. The action successfully removed residual dioxin contamination in several areas of the site, and included environmental use controls for a portion of the site that were developed in coordination with the Missouri Department of Natural Resources.

Additional actions are possible at the site (e.g., additional environmental use controls). EPA continues to engage with the City of Wildwood, the City of Ellisville, and residents of surrounding communities in resolving any further issues/concerns. EPA has strived to be as open and transparent as possible in information-sharing and discussions, and has valued the relationships that have been established with this local community.

Message

- EPA recently concluded a Superfund removal action at the site, removing contaminated soils and establishing environmental use covenants at portions of the site
- EPA continues to engage local leadership in resolving any further issues/concerns.

Contact: David Williams, 913-551-7625

Issue: West Lake Landfill Superfund Site

Background/Status:
The West Lake Landfill Superfund Site is located in Bridgeton, Missouri. It is a 200-acre municipal landfill site consisting of the State-permitted Bridgeton Sanitary Landfill and several older, unregulated landfill areas. EPA placed the site on the Superfund National Priorities List (NPL) in 1990. Two unregulated areas of the landfill, identified as Operable Unit (OU)-1, became radiologically contaminated in 1973 when 8,700 tons of leached barium sulfate (a uranium ore processing residue) were mixed with approximately 38,000 tons of soil and used as daily cover in the landfill operation. The remainder of the site is included in OU-2, which consist of the Bridgeton Landfill (or Former Active Sanitary Landfill) and two others, the closed Demolition and Inactive Sanitary Landfills are not contaminated with radiological materials. The Inactive Sanitary Landfill is being address through EPA, as it closed prior to existing state regulations. The other two have been deferred to the Missouri Department of Natural Resources (MDNR) in accordance with their existing permits and post-closure requirements.

The selected remedy in the OU-1 May 2008 Record of Decision (ROD) is to contain the waste material in place through construction of an engineered landfill cover, and implementation of a long-term monitoring and maintenance program. Based on a high level of public and political interest in the OU-1 remedy, which contains the radiologically impacted materials (RIM), EPA decided to conduct a supplemental study that evaluates full-scale excavation of the radiologically-contaminated landfill material with either off-site disposal or on-site disposal in an engineered cell. The responsible parties agreed to perform the supplemental feasibility study (SFS) under the existing administrative order on consent. However, the estimated costs defined for each alternative in the SFS report exceeded the threshold value, which triggered review by EPA's National Remedy Review Board (NRRB) in early 2012. The NRRB then provided recommendations for additional studies relating to the SFS Report. These include: evaluating additional groundwater sampling to refresh the data; conducting a groundwater fate and transport study, conducting a more detailed study of a partial excavation

alternative where only the most-contaminated material is removed, evaluating alternative landfill cap designs; and conducting a more detailed analysis of potential treatment technologies for the RIM.

In June, 2012, EPA Region 7 tasked the PRPs to conduct these additional studies. The PRPs conducted four rounds of additional groundwater sampling in 2013-2014. EPA then tasked the US Geological Survey (USGS) to help evaluate and interpret the new groundwater data. Once all of the additional remedy studies are complete, the SFS shall be revised and EPA will release a new proposed plan for an amended remedy and will take public comment on this proposed plan.

In addition to the remedy, since 2010 a subsurface smoldering event (SSE or pyrolysis) has occurred within the adjacent Bridgeton Former Sanitary Landfill, which is one of the non-radiologically impacted landfills deferred to MDNR. The SSE began to receive extensive press coverage in late 2012 when odors from the SSE or pyrolysis increased and generated complaints from local residents and businesses. The Missouri Attorney General's office filed suit against the landfill owner (Republic Services) on March 27, 2013 alleging violation of a number of Missouri environmental laws. The SSE area is more than 1,000 feet from the nearest area where radiological waste is located. In 2013 the State of Missouri filed a lawsuit against Bridgeton Landfill, and is requiring them to actively monitor the movement of the SSE.

Republic Services agreed to install the second and final contingent remedy called for under the AG's Order, which is the subsurface isolation barrier between the North Quarry landfill cell of the Bridgeton Sanitary Landfill, and Area 1 of OU-1 that contains RIM. Republic's contractors did an initial subsurface gamma survey of the area which lies within part of OU-1 Area 1 in October and November 2013. However, early results from this survey identified previously undiscovered RIM at depths of 25 or more feet to the southwest of OU-1 Area 1. In response, the additional core sampling began in January 2014 defined the extents of the RIM, which helped Republic select a location for the isolation barrier that does not disturb it.

With technical support from the U.S. Army Corps of Engineers (USACE), EPA Region 7 has been working concurrently with the PRPs to evaluate the engineering feasibility of constructing an isolation barrier at the site. As part of this effort, the PRPs for the West Lake Site recently agreed to perform additional characterization this year to further define the extent of RIM located outside of the previously-defined Area 1 boundary.

Message

- With regard to the OU1 ROD and SFS and additional studies, the high level of interest in West Lake Landfill has compelled EPA to undertake these steps to further demonstrate to the public that the eventually-implemented remedy at OU-1 is protective of human health and the environment.
- The USGS released their groundwater findings in a December 2014 report and will continue to support EPA technically throughout the pending groundwater fate and transport study.
- EPA sent a letter (April 20, 2015) to the responsible parties requiring additional RIM characterization work in OU1 Areas 1 and 2 in support of the partial excavation remedy evaluation and selection of excavation alternatives. Acceptance and negotiation for this additional work is pending.
- With regard to the isolation barrier, EPA sent a letter (January 15, 2015) to the responsible parties requesting additional RIM characterization between OU1, Area 1 and the Bridgeton Landfill. Following a technical meeting on January 23, 2015, the responsible parties agreed to perform this additional characterization. In March 2015, EPA received the responsible parties' work plan addendum, reviewed it and submitted comments for revision. The revised document was received by EPA on April 20 and is currently under review. EPA anticipates this work to proceed in May and be complete this summer.

- Pyrolysis Analysis: EPA is working with the Office of Research and Development, USACE to develop a set of analytical methods to test RIM under conditions consistent with the SSE at the Bridgeton Landfill. The intent is to determine what (if any) affect the increase in temperatures will have should a pyrolysis occur or come in contact with radionuclides in the RIM. EPA intends to complete this analysis concurrently this year with the additional site RIM characterization.
- EPA continues working with the responsible parties to ensure all of the additional remedy related evaluations (as recommended by the NRRB) are completed and meet the highest scientific standards.

EPA continues coordinating with the MDNR and the Missouri Attorney General's office for all matters regarding the site at either OU1 or OU2.

Contact: Jeff Field (913) 551-7548

Issue: <u>Carter Carburetor Site</u>

Background/Status:

The Carter Carburetor site is in an Environmental Justice community, including two dilapidated buildings and two associated vacant lots in St. Louis, Missouri. The primary contaminants found at this site include poly-chlorinated biphenyls (PCB), Trichloroethylene (TCE) and asbestos. The site is in a commercial area with nearby residential areas, and a Boys and Girls Club across the street to the north. The EPA has identified two Potentially Responsible Parties (PRPs): ACF Industries and Carter Building Incorporated (hereinafter ACF and CBI). ACF was the former owner of the buildings; CBI is the current owner of the buildings. ACF (under a CERCLA Administrative Settlement Agreement and Order on Consent) has spent several million dollars identifying the extent of contamination and quantifying the potential human health risks at the site. ACF has prepared an Engineering Evaluation/Cost Analysis (EE/CA) laying out several cleanup alternatives for four distinct areas of the site: the CBI Building, the Die Cast Area, the former aboveground TCE storage tank area, and the Willco Plastics Building.

The EE/CA was finalized and submitted to the public for comment in September 2010. After extending the public comment period several times, the EPA received numerous comments on the EE/CA. Responses to all substantial comments received from the public were documented in the site Responsiveness Summary. Taking into account comments from the community, the Region 7 Administrator signed an Action Memorandum in March 2011, which documents the appropriate removal actions to address contamination in each of the four areas described above. In December 2011, ACF voluntarily completed installation of a fence around the site to prevent unauthorized access and entry into the contaminated buildings.

The EPA completed negotiations with the PRPs and submitted the Settlement Agreements to the public for comment. Comments were received and evaluated, responsiveness summaries were prepared, and the Agreements became final. As part of the negotiations, the EPA agreed to remove debris from the building (which belonged to previous unknown tenants) which is potentially asbestos-contaminated. This fund lead action was performed pursuant to an action memorandum signed by the Regional Administrator and, due to the potential for asbestos in the debris, concurred upon by EPA Headquarters, Office of Emergency Management (OEM).

EPA completed the debris removal in the fall of 2013. Debris was either recycled or sent

offsite to a disposal facility. The OSC will continue to conduct periodic inspections of the site for possible entry by unauthorized persons. Any entry points will be secured as necessary. The PRP began removal actions on April 21, 2014 and to-date has completed more than 85% of asbestos abatement, lead paint removal, and power washing of the building interior in preparation for demolition. Asbestos abatement currently continues at the site and the PRP is obtaining bids and evaluating contractors to begin demolition of the buildings and excavation of the contaminated soil. This work is expected to begin during the summer of 2015.

- **Talking Points**

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